AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in this application. Added matter is indicated by underlining and deleted matter is indicated by strikethroughs or double brackets ([[]]).

1-116 (Cancelled)

117 (Currently Amended) A method according to claim 131 ~~claim 116~~, wherein the intraocular lens is provided by selection from a kit of intraocular lenses which includes a plurality of intraocular lenses with different capacity to correct said corneal aberration ~~at least one aberration term within each diopter~~.

118 (Currently Amended) A method according to claim 131 ~~claim 116~~, wherein the lens is provided by designing a lens that is capable of reducing said corneal aberration ~~at least one aberration term resulting from the wavefront sensing of the eye after the natural lens is removed~~.

119 (Currently Amended) A method ~~according to claim 116 further wherein the steps, in any order, of partially compensating for aberrations in the eye comprising the steps of:~~ of performing visual correction in a patient by implanting an intraocular lens, which at least partially compensates for an aberration of the cornea, comprising:

(i) measuring an aberration of the eye by:

measuring at least one surface of the cornea of an eye;

characterizing the at least one surface as a mathematical model;

using the measurement to determine a corneal spherical aberration of the eye;

~~(i) characterizing at least one surface of a cornea as a mathematical model;~~

~~(ii) calculating a spherical aberration of the cornea by employing said mathematical model;~~

[[(iii)]](ii) modeling an intraocular lens having a spherical surface and an aspheric surface, the spherical surface having a radius, and the aspheric surface having a radius, a conic constant and at least one non-zero aspheric polynomial constant;

[[(iv)]](iii) selecting a power of the intraocular lens, wherein the radius of the spherical surface and the radius of the aspheric surface determine the power of the intraocular lens; and

[[(v)]](iv) selecting a spherical aberration of the intraocular lens to offset the spherical aberration of the cornea, wherein the conic constant and the at least one aspheric polynomial constant of the aspheric surface determine the spherical aberration of the intraocular lens.

120 (Previously Presented) The method of claim 119, wherein the sum of the spherical aberration of the cornea and the sum of the spherical aberration of the intraocular lens is sufficiently reduced.

121 (Previously Presented) The method of claim 119, wherein the sum of the spherical aberration of the cornea and the sum of the spherical aberration of the intraocular lens is closer to zero than the spherical aberration of the cornea alone.

122 (Previously Presented) The method of claim 119, wherein the aspheric surface is an anterior surface of the intraocular lens, and the spherical surface is a posterior surface of the intraocular lens.

123 (Previously Presented) The method of claim 119, wherein the aspheric surface is an anterior surface of the intraocular lens, and the spherical surface is a posterior surface of the intraocular lens.

124 (Previously Presented) The method of claim 119, wherein the spherical aberration of the intraocular lens is adjusted by changing the values of the conic constant and at least one aspheric polynomial constant of the aspheric surface, without changing the values of the radii of the spherical and aspheric surfaces.

125 (Previously Presented) The method of claim 119,

wherein the cornea is an average cornea having a mean radius and a mean shape; and

wherein the sum of the spherical aberration of the average cornea and the spherical aberration of the intraocular lens is roughly zero.

126 (Previously Presented) The method of claim 119,

wherein the cornea is for a particular patient; and

wherein the sum of the spherical aberration for the particular patient cornea and the spherical aberration of the intraocular lens is roughly zero.

127 (Previously Presented) The method of claim 119,

wherein the cornea is for a particular patient; and

wherein the spherical aberration of the intraocular lens is adjustable in discrete increments by selecting the intraocular lens from a predetermined kit of lenses, with each lens in the predetermined kit of lenses having the same power but having different amounts of spherical aberration.

128 (Previously Presented) The method of claim 127, wherein each lens in the predetermined kit of lenses has a spherical surface having the same radius, and has an aspherical surface having the same radius but having different conic constants and at least one different aspheric polynomial constant.

129 (Previously Presented) The method of claim 119, wherein the intraocular lens is biconvex.

130 (Previously Presented) The method of claim 129, wherein the radius of the spherical surface is essentially equal to the radius of the aspherical surface.

131. (New) A method of performing visual correction in a patient by implanting an intraocular lens, which at least partially compensates for an aberration of the cornea, comprising:

(i) measuring an aberration of the eye by:

measuring at least one surface of the cornea of an eye;

characterizing the at least one surface as a mathematical model;

using the measurement to determine a corneal aberration of the eye;

(ii) modeling an intraocular lens having an aspheric surface comprising a radius and a conic constant; and

(iii) based on the mathematical model and the model of the intraocular lens, selecting the radius and the conic constant to offset the corneal spherical aberration.

132. (New) The method of claim 131, wherein measuring includes measuring the corneas of a population.

133. (New) The method of claim 132, wherein the corneal aberration is an average corneal aberration of the population.

134. (New) The method of claim 133, wherein the population includes people of a specific age group, people with a cataract, people who have received a corneal ablative procedure, people who are candidates for a corneal ablative procedure, and/or people who are highly myopic or highly hyperopic.

135. (New) The method of claim 133, wherein the corneal aberration is a spherical aberration.